

## ABSTRACT

A method is described comprising inserting an allocation instruction within a routine if a function call instruction is found within the routine.

Another method is described comprising inserting multiple allocation

- 5 instructions within a routine by searching for one or more functional characteristics within the routine and inserting an allocation instruction within the routine if a functional characteristic is discovered. Another method is described comprising performing a first allocation for a first amount of register space at the entry block of a routine and then performing a second allocation for
- 10 a second amount of register space for the live information within the routine at the time of the second allocation. Then, performing a function call to a second routine and performing a third allocation for a third amount of register space at the entry block of the second routine, the third amount of register space and the first amount register space having a common register.